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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,183	02/26/2004	Peter J. Coassin	AURO1420-1	6955

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EXAMINER

LUDLOW, JAN M

ART UNIT	PAPER NUMBER
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1743

MAIL DATE	DELIVERY MODE
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07/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/789,183	Applicant(s) COASSIN ET AL.	
	Examiner Jan M. Ludlow	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8-10,12,13,15-18,72-78,80 and 82-85 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8-10,12,13,15-18,72-78,80 and 82-85 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/26/2004, 6/15/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 14, 2007 has been entered.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 3-6, 8-10, 12-13, 15-18, 72-78, 80, 82-85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun and Sollbohmer, and further in view of Peck et al and/or Krug et al. and Churchill (2004/0219688).

Sun teaches a dispenser having a battery 12 of pumps 42 (instant pressurization) coupled to reagent containers 26 and dispensing tips via solenoid valve 32, shown in a compact arrangement in figure 1. The dispenser and an XYZ positioning table under computer control position an assay plate to delivery test solutions to wells (col. 3, lines 8-47).

Sun fails to teach the dispensers in a module removably attached to a frame.

Sollbohmer teaches a dispensing module including tips 12, pumps 46 and reagent containers 24 on head 10 removably coupled to frame 22 by sliding (quick) connectors 50, 52.

Sun and Sollbohmer fail to teach air pressurization, switchback and on-the-fly dispensing.

Peck et al teaches a dispenser similar to that of Sun, including gas pressure to pump fluid from containers through lines to dispensers (Fig. 2).

Krug et al teaches a dispenser similar to that of Sun, including gas pressure to pump fluid from containers through lines to dispensers (Fig. 1).

Churchill teaches a dispenser similar to the primary references using switchback (Fig. 6) and on-the-fly dispensing ([0150-0151, 0199, 0229, 0237, 0262] and elsewhere).

5. It would have been obvious to one of ordinary skill in the art to provide the tips, pumps, valves and reagent containers of Sun in a dispensing module like that of Sollbohmer in order to provide an easily replaceable dispensing module in an analytical device as taught by Sollbohmer. It is the examiner's position that the reagent containers of Sun are structurally capable of receiving pressurized air and that no source of pressurized air is positively recited. With respect to dimensions not specifically taught, it would have been obvious to optimize tip spacing in order to use known well plates and to optimize tube length and volume to minimize reagent volumes for the dispensing of small volumes (e.g., 1nl to 500 ul [0012]) in order to save on reagent cost, waste, etc. With respect to claims 15-17, it is the examiner's position that the results are inherent.

It would have been further obvious to one of ordinary skill to use gas pressurization to pump fluid to a dispensing tip in the apparatus of Sun and Sollbohmer

in order to provide an alternative method of fluid pumping in a dispensing device as taught by Peck and/or Krug. With respect to the alternative rejection of claims 1, 3-6, 8-18, the alternative pumping arrangement taught by Peck and/or Krug includes the claimed configuration.

It would have been further obvious to use switchback and on-the-fly (continuous movement with open pulses necessarily shorter than the interval between deposit sites to make discrete spots or fill discrete wells) dispensing as taught by Churchill in order to minimize dispensing time.

6. Claims 1, 3-6, 8-10, 12-13, 15-18, 72-78, 80, 82-85 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/67114 (hereafter WO) in view of Sollbohmer (2002/0051737) and Churchill (2004/0219688).

7. WO teaches frame 4, dispensing module including reagent containers 6, 7, pressurized air manifold 8, and dispense tips 13, 14 over moveable assay plate on an X-Y stage.

WO fails to teach the dispensers in a module removably attached to the frame switchback and on-the-fly dispensing.

Sollbohmer teaches a dispensing module including tips 12, pumps 46 and reagent containers 24 on head 10 removably coupled to frame 22 by sliding (quick) connectors 50, 52.

Churchill teaches a dispenser similar to the primary references using switchback (Fig. 6) and on-the-fly dispensing ([0150-0151, 0199, 0229, 0237, 0262] and elsewhere).

8. It would have been obvious to one of ordinary skill in the art to provide the tips, pumps, valves and reagent containers of WO in a dispensing module like that of Sollbohmer in order to provide an easily replaceable dispensing module in an analytical device as taught by Sollbohmer. With respect to dimensions not specifically taught, it would have been obvious to optimize tip spacing in order to use known well plates and to optimize tube length and volume to minimize reagent volumes for the dispensing of small volumes in order to save on reagent cost, waste, etc. With respect to claims 15-17, it is the examiner's position that the results are inherent.

It would have been further obvious to use switchback and on-the-fly (continuous movement with open pulses necessarily shorter than the interval between deposit sites to make discrete spots or fill discrete wells) dispensing as taught by Churchill in order to minimize dispensing time.

9. Applicant's arguments with respect to claims above have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jan M. Ludlow whose telephone number is (571) 272-1260. The examiner can normally be reached on Monday-Thursday, 11:30 am - 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jan M. Ludlow
Primary Examiner
Art Unit 1743

Jml
July 23, 2007